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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,547	07/30/2003	Patrick A. C. Gane	239126US0CONT	6504

22850 7590 03/30/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
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EXAMINER

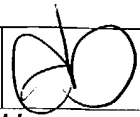
CHIN, PETER

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,547	<b>Applicant(s)</b> GANE ET AL.	
	<b>Examiner</b> Peter Chin	<b>Art Unit</b> 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All    b) ☐ Some \*    c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/857,217
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/30/03</u> . | 6) <input type="checkbox"/> Other: ____  |

### DETAILED ACTION

1. Claims 1-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hornsey (5,378,322) in view of Strauch et al (4,767,464) or Bauman (4,026,762).

Hornsey shows an aqueous fiber dispersion containing calcium carbonate filler and  $\text{CO}_2$ . The  $\text{CO}_2$  reacts in water in the presence of the calcium carbonate to produce  $\text{HCO}_3^-$  which catalyzes the reaction and thus, sizing action of ketene dimer on the cellulose fibers. As one can see from reaction (2), the addition of acid will drive the reaction towards the left hand side, that is to say to create more bicarbonate ion. Thus, one of ordinary skill in the art would have found it obvious as a matter of basic chemistry knowledge to add acid as long as the pH of the suspension stays within 7-9 range. Note that the present claims by virtue of the claim language "comprising", is open to the presence of fibers and sizing agents.

It would have been obvious to employ natural calcium carbonate such as limestone, chalk, marble, or calcite, since it is a well known and conventional form of calcium carbonate filler in the art as evidenced by Strauch et al or Bauman.

2. Claims 1-60 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The only "medium to strong"  $\text{H}_3\text{O}^+$  ion-providers are defined by a specific group of acids,  $\text{H}_2\text{SO}_4$ ,  $\text{HSO}_3^-$ ,  $\text{H}_3\text{PO}_4$ , oxalic acid and mixtures thereof. The particle must have a mean grain diameter and specific area of 0.1-50.0 micrometers and 5-200  $\text{m}^2/\text{g}$ , respectively. These criteria are critical or essential to the

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practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

3. Claims 1-60 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-59 of U.S. Patent No. 6,666,953. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are of broader scope so as to obviously encompass the invention claimed in the patent.

4. The present invention produces calcium carbonate filler having unexpected superior properties. It is produced under very specific conditions using specific acids to obtain specific grain size and area. Thus, if the independent claims were properly amended to obviate the above rejection, the amended claims would be allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (571) 272-1186. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter Chin  
Primary Examiner  
Art Unit 1731